Louisville and Jefferson County
Metropolitan Sewer District

400 South Sixth Street
Louisville, Kentucky 40202-2397

Mail To: P.O. Box 740011
Louisville, Kentucky 40201

502-540-6000

MSD

July 16, 1993

Ms. Liza Montalvo
Residual Project Manager
North Superfund Remedial Branch
U. S. EPA
Region IV
345 Courtland Street, N. E.
Atlanta, GA 30365

Re: Results of Air Quality Monitoring - FY 93 Fourth Quarter (FY93-4Q), Lees' Lane Superfund Site, Jefferson County, Kentucky Administrative Order on Consent, U. S. EPA Docket No. No. 91-32-C

Dear Ms. Montalvo:

In accordance with Paragraph 11, under Reporting Requirement, of the subject Consent Order and Attachment I, Operation and Maintenance Plan for Post-Removal Site Control at the Lees' Lane Landfill Site, Section 4.2, Air Quality Monitoring, attached for your information and files is one photocopy each of the following letter of July 12, 1993, analyses and sampling location map prepared by Radian Corporation, P. O. Box 13000, Research Triangle Park, North Carolina 27709, as received by MSD on July 13, 1993:

1. Radian Corporation letter, dated July 12, 1993, 2 pages.

2. Figure 1, Lees' Lane Landfill, Sampling Locations, 1 page.

3. Table 1, TO-14 Data Summary for Ambient Air Samples at the Lees' Lane Landfill, Sampling date: 05/25/93, 1 page.

4. Table 2, On-Site Meteorological Data, May 25, 1993, 1 page.

5. Radian Corporation, Table 3, TO-14 Data Summary for Gas Monitoring Well Samples at the Lees' Lane Landfill Sampling date: 05/25/93, 1 page.

DOCUMENT CONTROL NUMBER 4400-83-AGVZ

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Please advise if you have any questions concerning these sampling arrangements.

Very truly yours,

C. A. Neumayer
Director of Operations

CAN/dc
CAN30.7S

Enclosures

cc: KNREPC, Attn: Mr. Rick Hogan
Division of Waste Management
G. R. Garner, Executive Director
File WD-2 (Lees Lane M&M Quarterly)

RADIAN
CORPORATION

Progress Center
3200 E. Chapel Hill Rd./Nelson Hwy.
P.O. Box 13000
Research Triangle Park, NC 27709
(919)481-0212

July 12, 1993

Mr. Dan Sammons
Chief Chemist
Louisville Metropolitan Sewer District
4522 Algonquin Parkway
Louisville, Kentucky 40211

Dear Dan,

Enclosed is the summary analytical report for the ambient and gas monitoring well samples collected at the Lee's Lane Landfill site on May 25, 1993.

A revised map of the site has been labelled with the sample collection locations for your reference in Figure 1. Table 1 is a tabular summary for the ambient sample with the primary analytes required for submission to EPA.

The monitoring sites for this quarterly collection were chosen based on a combination of prevailing on-site meteorology and available sites in the adjacent residential neighborhood per the standard sampling protocol. The prevailing wind on the monitoring day was light from the North. Hourly readings of wind speed and direction from an off-site source were recorded by LMSD personnel. The meteorological data is summarized in Table 2. The ambient samples were collected 3-5 feet above ground level. The ambient samples collected were integrated over a 7-8 hour collection period in Summa® canisters. The methane analysis was performed by GC/FID on a separate analytical column prior to the TO-14 analysis. The TO-14 analytical methodology by Gas Chromatography/Mass Spectrometry (GC/MS) was employed for this set of quarterly samples. The GC/MS was chosen to confirm the presence of TO-14 compounds.

Table 3 is a tabular summary of the gas well samples with the primary analytes required for submission to EPA. Each set of gas monitoring wells was screened with field monitors (OVA-128, combustible gas meter, and PhotoTip). The values for methane were recorded by the OVA-128. The OVA values were used to select the wellhead (S or D) for collection of the canister sample.

The methane analysis was done by Gas Chromatography/Flame Ionization Detection (GC/FID) at Radian's Perimeter Park Laboratory. Sample canisters and flow controllers were cleaned and blanked by TO-12 for total hydrocarbons prior to field deployment.

Samples were handled with standard laboratory chain of custody procedures. The GC/MS confirmation by TO-14 was subcontracted to Air Toxics Limited (ATL).

The laboratory determined methane results are consistent for both the ambient air and the gas monitoring wells. These laboratory results for methane are in agreement with the field determined OVA measurements. The TO-14 results by GC/MS analysis of the Summa® canisters are generally at or below the analytical detection limits. It should be noted that the TO-14 detection limits for this set of samples are higher than previous quarters. The increase is due to the GC/Mass Spectrometer utilized instead of the GC/MD. Very few TO-14 compounds were detected in either the ambient or gas well samples. The presence of methylene chloride at very low concentrations was confirmed in 3 of the ambient air samples.

Radian appreciates the opportunity to assist your staff with this project. Please advise me at (919) 481-0212 if you have any questions.

Sincerely,

Robert F. Jongleux
Project Director

RFJ/pjsj116

Attachments

cc: G.A. Holliden, Radian/LOU

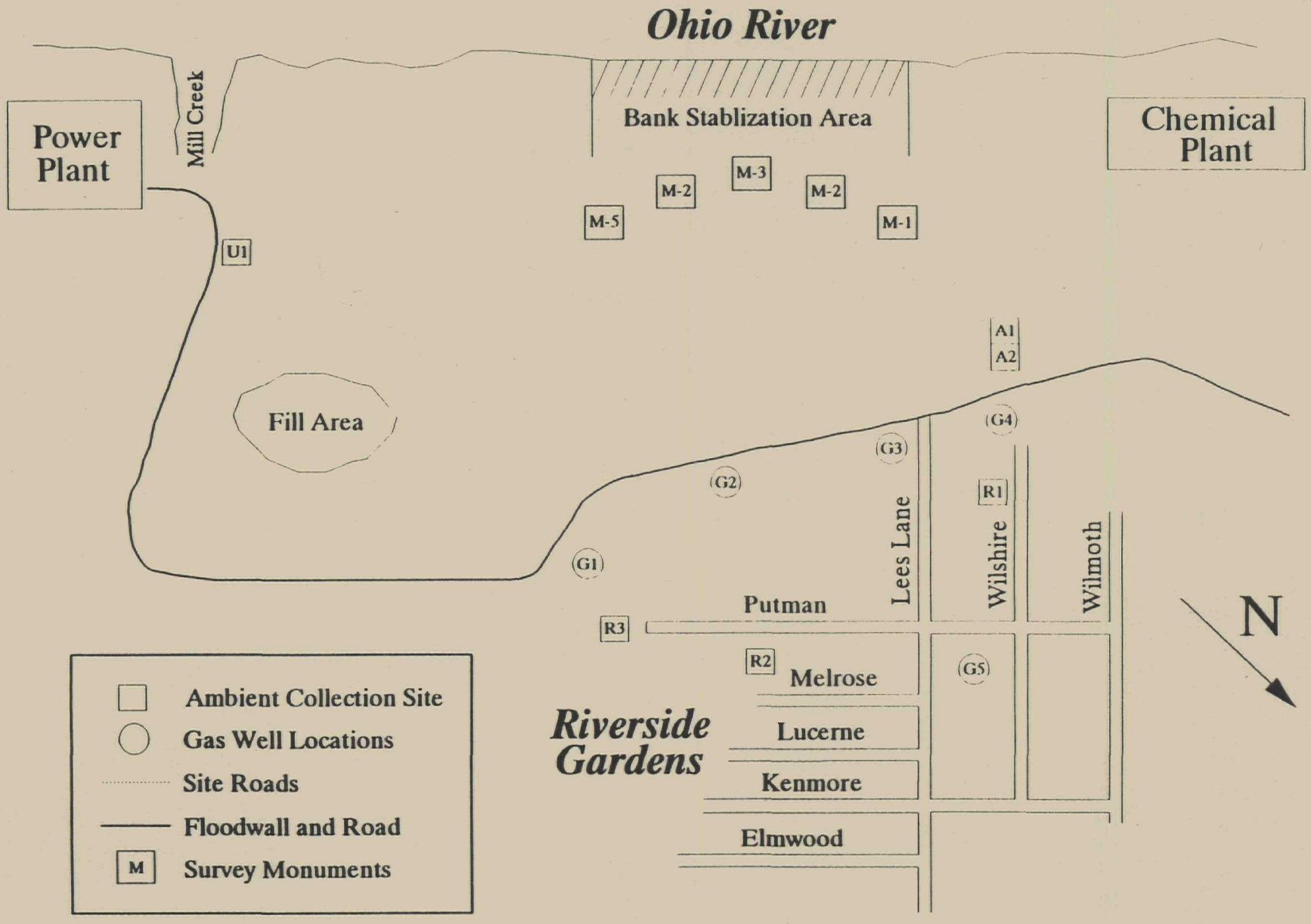

Figure 1. Lees Lane Landfill Sampling Locations

Not to scale.

TABLE 1

TO-14 DATA SUMMARY FOR AMBIENT AIR SAMPLES AT THE LEES'S LANE LANDFILL
LOUISVILLE, KENTUCKY

SAMPLING DATE: 5/25/93

Sample ID	AS-U1	AS-A1	AS-A2	AS-R1	AS-R2	AS-R3
Canister ID	A141762	A127729	A127727	A127734	A141752	A141767
Location	Upwind	Downwind	Downwind	Residential	Residential	Residential
Dilution Factor	.8316	.8602	.8214	.8284	.8826	.9288
Compound (conc. in ppbv)						
Benzene	<.80	<.80	<.80	<.80	<.75	<.70
Toluene	<.80	<.80	.91	<.80	<.75	<.70
Xylene (total)	<.80	<.80	<.80	<.80	<.75	<.70
Methylene Chloride	<.80	<.80	1.7	1.1	3.1	<.70
Vinyl Chloride	<.80	<.80	<.80	<.80	<.75	<.70
Methane (ppm)	1.66	1.92	2.25	1.68	2.07	2.33

Note: less than values indicate compound was at or below the analytical detection limit.

TABLE 2

ON-SITE METEOROLOGICAL DATA
MAY 25, 1993

Time	Barometric Pressure (in Hg)	Humidity (%)	Wind Direction	Wind Speed (mph)	Observations
900	30.13	60	S	0	Mostly Sunny
930	30.13	60	N	3	Mostly Sunny
1000	30.13	60	N	0	Mostly Sunny
1030	30.13	57	N	0	Mostly Sunny
1100	30.14	54	NW	8	Mostly Sunny
1130	30.13	55	NW	12	Mostly Sunny
1200	30.13	53	NW	9	Mostly Sunny
1230	30.13	52	NW	6	Mostly Sunny
1300	30.13	52	W	8	Mostly Sunny
1330	30.12	51	W	11	Mostly Sunny
1400	30.12	49	W	14	Mostly Sunny
1430	30.12	49	NW	15	Mostly Sunny
1500	30.12	46	NW	9	Mostly Sunny
1530	30.12	48	W	12	Mostly Sunny
1600	30.12	46	NW	12	Mostly Sunny

** Compiled by LMSD personnel at Lee's Lane Landfill Site **

TABLE 3

TO-14 DATA SUMMARY FOR GAS MONITORING
WELL SAMPLES AT THE LEE'S LANE LANDFILL
LOUISVILLE, KENTUCKY

SAMPLING DATE: 5/25/93

Sample ID	AS-G1D	AS-G2S	AS-G3S	AS-G4D	AS-G5SV	AS-G5SVD	FBL
Canister ID	A127724	A127732	A141754	A141750	A127721	A127733	A141745
Dilution Factor	.9196	.8867	.9026	.9127	.9288	.9477	1
Orifice	D8	D6	D-104	D-B1	D-33	D3	--
Compound (conc. in ppbv)							
Benzene	<.85	<.80	<.75	<.75	<.70	<.70	<.65
Toluene	<.85	1.0	<.75	<.75	<.70	1.4	<.65
Xylene (total)	<.85	<.80	<.75	<.75	<.70	<.70	<.65
Methylene Chloride[a]	<.85	<.80	<.75	<.75	<.70	<.70	<.65
Vinyl Chloride	<.85	<.80	<.75	<.75	<.70	<.70	<.65
Methane (ppm)	2.08	2.06	.84	1.98	1.24	1.97	ND

Note: Less than values indicate compound was at or below the detection limit